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# MANUAL

—OF—

# CHILDBED NURSING.

BY

CHARLES JEWETT, A. M., M. D.,

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# PREFACE.

THIS Manual of Childbed Nursing was originally prepared for the use of the Training School for Nurses at the Long Island College Hospital. It has since been rewritten and adapted to general use. Its object is not so much to furnish a text-book on the subject as to aid the pupil in remembering the more important practical teachings of the lecture course and the ward training; hence the plan of statement in condensed paragraphs. The author ventures the hope that the book may be found of service to graduates as well and to all interested in obstetric nursing.

*330 Clinton Ave., Brooklyn, N. Y.,*
*January, 1893.*

# MANUAL

-OF-

# CHILDBED NURSING.

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## PREGNANCY.

**Medical Supervision.**—The pregnant woman should place herself under the direction of her physician from the first months of pregnancy; should consult him frequently during the latter months.

**Rules of Health.**—Most essential are :—

Daily open-air exercise for one or two hours;

Avoidance of exhaustion and violent muscular exertion;

Regularity of meals;

Regulation of the kind and quantity of food, as the physician may direct;

Proper action of the bowels, once daily;

Eight hours of sleep daily;

Pure air at all times;

A sponge bath twice weekly in winter, once daily in the summer months; should be taken in a warm room, and with plenty of friction to secure complete reaction;

Clothing to suit climatic changes;

Light flannel underwear at all seasons;

Avoidance of tight clothing, especially about the breasts and abdomen.

**Care of the Nipples.**—During the last month the nipples should be cleansed daily with a borax solution—tablespoonful to a pint of water. They may be anointed with fresh cocoa butter after cleansing, and if small or sunken should be gently drawn with the thumb and fingers.

**Examination of the Urine.**—Once a week during the last month or two a sample of the urine should be sent to the doctor for examination.

# THE LABOR.

**To Predict the Date of Labor.**—Add seven days to the date when the last menstruation began and count forward nine months. Usually accurate within a week.

**Preparation for Labor.**—For the lying-in chamber, select, if possible, a large, well ventilated room with a southern exposure, remote from the water-closet, and having no defective waste-pipes nor other exposure to housé drainage.

Cleanliness of the room and its contents, entire freedom from decomposing animal or vegetable matter and the poisons of contagious disease are imperative.

Especially dangerous is the contagion of child-bed fever, suppurating wounds, erysipelas, diphtheria or scarlet fever.

Much drapery is insanitary; it catches dust and disease germs.

HAVE READY:—

A dozen clean sheets;

A dozen towels recently laundered;

A dozen pieces of fresh-boiled cheese-cloth, or butter-cloth, about 18 inches square, for wash-cloths;

Two or three pieces of straight unbleached muslin for binders, a yard and a quarter long by half a yard wide;

Two surgically clean rubber sheets, large enough

to reach across the bed; table oilcloth may be substituted for rubber where economy requires;

A rug, rubber sheet or oilcloth, to protect the carpet beside the bed;

Scissors;

Two dozen shield-pins of medium size;

A Davidson or a fountain syringe;

A clean vessel to receive the placenta;

A bedpan of earthenware, or agate ironware.

Plenty of hot and of cold water;

A half-pint of brandy or whiskey;

Two or three clean hand-basins of agate ironware or earthenware;

A slop jar;

Two new hand-brushes;

Two ounces of glycerine as a lubricant for the doctor's hands. Add a grain each of the biniodide of mercury and the iodide of potassium;

A yard of strong, linen bobbin, one-sixteenth inch wide, for tying the navel-cord;

Vaseline, or sweet oil, for anointing the child;

A woolen blanket for wrapping the child;

A child's bath-tub and a bath thermometer;

Castile soap;

A package of salicylated cotton;

The child's clothing.

**Preparation of the Bed.**—Cover the mattress with a muslin sheet and that with a rubber sheet.

Spread a clean muslin sheet over the rubber and pin fast to the mattress.

Spread over that a second rubber covered with a muslin sheet.

Place two or three fresh laundered sheets, twice folded, in position to receive and absorb the discharges.

A thick pad of prepared jute, or similar absorbent material, covered with fresh-boiled cheese-cloth, may be used instead of the folded sheets. It should be about three feet square.

A separate cot dressed as above described may be used for the confinement instead of the bed, the patient being transferred to the bed after delivery.

**Hygiene of the Lying-in Room.**—The most scrupulous cleanliness is imperative.

Pure air is at all times indispensable.

Ventilation to be effective must be constant.

An open fire is a good ventilator.

Sunlight is an important sanitary agent.

The temperature of the room may be from 68° to 70° F., five or six degrees lower at night.

**Signs of Beginning Labor.**—*Pains in the lower abdomen and back*, recurring at regular intervals, at first about once a half-hour. The uterus hardens during the pains. (As the labor advances the pains strengthen and the intervals shorten to one or two minutes or even the fraction of a minute toward the close of the labor.)

*The "show,"* a discharge of bloody mucus from the vagina.

*Evacuations of the bladder and bowels* more frequently than usual.

**Stages of Labor.**—FIRST STAGE OR STAGE OF DILATATION.—Ends with the full dilatation of the neck of the womb.

SECOND STAGE OR STAGE OF EXPULSION.—Ends with the birth of the child.

THIRD STAGE OR PLACENTAL STAGE.—Ends with the expulsion of the placenta and the persistent contraction of the uterus.

## DUTIES OF THE NURSE DURING THE LABOR.

**First Stage.**—Notify the doctor when the labor begins or be guided by instructions previously obtained.

Messages to the doctor are best put in writing and should give stage of progress and full particulars.

Give the patient the liberty of the room.

Tell her not to "bear down" during the pains of this stage.

The bladder should be frequently evacuated.

Empty the lower bowel by an enema of warm water in every case.

A *hot* rectal injection stimulates the pains and therefore may or may not be proper in a given case.

Moving about the room or even the bed has a like effect.

Give such simple food and drink as the patient may require.

**For the Doctor's Examination.**—Have ready for the doctor's use, soap, hot water, two agate iron-ware or earthenware hand-basins, two hand-brushes and one of the mercurial solutions (page 22) for sterilizing the hands.

Place the patient on her back in bed, at the right side, with the clothing adjusted for the abdominal and the pelvic examinations.

Before the first vaginal examination prepare your hands as directed on page 23 and carefully cleanse the external genitals and surrounding surfaces with soap and water, remove the soapy water and bathe with the biniodide or bichloride of mercury solution.

**Second Stage.**—The patient should keep the bed from the time the labor approaches the second stage, generally after the escape of the waters or after the pains become severe; should not, as a rule, be permitted to leave the bed during the second stage, not even for evacuations of the bladder or bowels.

She should be dressed for the bed with her clothing tucked under the arms and pinned and with a folded sheet fastened about the waist in the manner of a skirt.

Firm pressure against the lower part of the back during the pains usually gives relief.

The patient may be allowed to pull upon the hand of a bystander during the pains, or upon a sheet tied to the foot of the bed. This, however, increases the expelling power and should be omitted in over-rapid labor.

GIVING CHLOROFORM.—Have the head low and

clothing loose. Remove false teeth. Smear the skin about the mouth and nose with vaseline or glycerine, to prevent "burning" by the chloroform.

Spread a thin towel over the patient's face; lift it by the middle so as to form a large air chamber about the face.

Sprinkle the chloroform upon the upper surface of the towel opposite the mouth and nose. Five to ten drops are usually enough for an ordinary pain.

Give it only during the pain, the inhalation beginning promptly with the pain. It may usually be pushed to unconsciousness during the passage of the head over the perineum.

FOR VERSION OR FORCEPS OPERATION.—Place the patient directly across the bed, upon her back, with the hips close to the edge of the bed, and the knees drawn far up and well apart.

Each lower extremity may be covered with a separate sheet or blanket.

One assistant is usually required at each of the knees to hold them in the position described.

**Third Stage.**—The nurse may be required to "hold the fundus" while the doctor is otherwise engaged. This consists in "watching" the uterus by laying the hand lightly upon the abdominal wall over the upper surface of the uterus to know whether it remains properly contracted. Moving the abdominal walls in a circular direction over the surface of the uterus or even grasping the womb may be needed to promote contraction.

Keep the placenta for the doctor's examination; afterward destroy by burning in the range or furnace fire.

At the close of the third stage the patient's body should be cleansed of blood and discharges by bathing with an antiseptic lotion—one of the mercurial solutions preferred (page 22). Sponges should never be used for bathing the genitals, but a fresh-boiled cloth instead, which has lain for several minutes in the antiseptic solution immediately before use.

Always resterilize your hands before contact with the genital wounds.

The upper rubber sheet should be removed and all soiled bedding and soiled clothing replaced with clean.

A draw-sheet, consisting of a clean muslin sheet, twice folded, may be placed under the patient's hips. It should be changed as often as it becomes in the least soiled.

The remaining rubber sheet is not usually needed after four or five days.

VULVAR DRESSING.—Cover the external genitals, after cleansing, with a folded napkin (the lochial guard) which has been previously wrung out of one of the mercurial solutions and dried. Hold in place with a T bandage.

A good substitute for the napkin as a vulvar dressing may be made of jute or other absorbent material enveloped in cheese-cloth. Boil for a half-hour, dip in one of the mercurial solutions and dry them. Burn after using.

THE BINDER should reach from the breast-bone to a point just below the hips.

Pin with shield-pins and moderately tight for the first twelve hours, thereafter less firmly.

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## THE PUERPERAL PERIOD.

### Points to be Noted by the Nurse Twice or More Daily During the First One or Two Weeks.

GENERAL CONDITION OF THE PATIENT.—Appetite. Color and expression of the face. Appearance of the tongue. Pains. Chills.

PULSE.—Normal pulse-rate of the puerperal woman is lower than the ordinary pulse.

TEMPERATURE.—Physiological upper limit, first four days 99⅓°; thereafter 99° F.

EVACUATIONS OF THE BLADDER AND BOWELS.

CONDITION OF THE BREASTS, whether distended, hard, painful, nipples well formed, tender, or cracked.

CONDITION OF THE ABDOMEN, bloated, tender on pressure.

CONDITION AND SIZE OF UTERUS.—The uterine contractions should be firm; at first intermittent, after about an hour, nearly or quite persistent. Tenderness on pressure over the uterus should diminish

daily and should disappear after three or four days. Fundus at the close of labor nearly midway between the navel and the pubes; a few hours later at the navel; tenth day at the pubes. (Note that the uterus may be pushed up bodily by a full bladder or rectum.)

CHARACTER AND AMOUNT OF LOCHIA.—The normal flow is more or less bloody for about four days, paler and thinner for three or four, then creamy; gradually diminishes in quantity from the close of labor. Total amount in the first two weeks about $3\frac{1}{4}$ lbs. Duration two to four weeks. Should never have a fetid odor.

Watch closely the amount of flow during the first two or three hours after labor.

NURSE'S RECORD.—For the first week or more after labor keep a concise daily record of the case, according to the form on the following pages. Begin each day's report upon a new page or folio. Keep it filled out to date in readiness for the doctor's use.

# NURSE'S D

NAME OF PATIENT: _____

_____, 189 ....

| Hour. | Pulse. | Temp. | Micturition. | Defecation. | DIET. | LOCHI<br>Amount,<br>Color,<br>Odor,<br>Clots. |
|---|---|---|---|---|---|---|
| | | | | | | |

# RECORD.

DAY SINCE CONFINEMENT, _____

| ASTS d LES. | CHILD: Pulse, Temp., Micturition, Defecation, Sleep. | REMARKS. |
|---|---|---|
| | | |

## CARE OF THE PATIENT.

**General Rules.**—The patient should lie on the back for the first few hours after labor. Later the posture should be frequently changed.

Sleep relieves the exhaustion following labor.

Rest and quiet are indispensable.

During the first week or more exclude visitors.

The nurse should sleep on a separate cot in the same room with the patient.

Give no medicine without instructions.

Advise the doctor at once of any important abnormal occurrence in childbed.

**Cleanliness.**—Absolute cleanliness of the person, the clothing, and the bedding of the patient is imperative.

A general bath may be given once in two or three days with a fresh wash-cloth and warm water.

Replace the lochial guard with a fresh one every three to six hours the first three days, and at all times often enough to prevent the slightest bad odor.

The external genitals and immediate surroundings should be thoroughly cleansed with one of the antiseptic solutions when the vulvar dressing is changed. Permit no fetor.

Allow nothing to touch the genitals that has not first been sterilized or made germ-free by one of the antiseptic agents mentioned below.

Vaginal douches should not be used unless ordered.

Soiled lochial guards and all soiled linen should be immediately removed from the room.

**Diet** may be liquid or light solid food for the first day, especially if the patient is much exhausted or has taken an anæsthetic, *e. g.*, milk, gruels, beef essence, animal broths, dropped or soft-boiled egg, oatmeal mush or wheaten grits, dry toast and weak tea or cocoa.

Thereafter, in the absence of exhaustion, fever, bad digestion, or loss of appetite, a moderately full diet as a rule.

**Care of the Breasts and Nipples.**—In simple engorgement of the breasts gentle massage with oiled hands, rubbing from the base toward the nipple, is permissible if it relieves pain.

An inflamed breast must not be rubbed.

Support by means of a bandage is useful in case of over-distension.

The patient must take fluids sparingly while the breasts are engorged.

The nipples should be cleansed after each nursing, best with a weak antiseptic solution, *e. g.*, a saturated solution of salicylic acid in water.

**The Bladder.**—The bladder should empty itself within eight hours after delivery and every eight hours subsequently.

Note carefully the amount and frequency of urination.

Retention of urine may sometimes be relieved by suprapubic pressure, hot fomentations to the pubic region, the sound of running water, rectal injections of warm water, or, with the doctor's permission, by allowing the patient to sit up in bed for voiding the urine.

Do not use the catheter without consent of the attending physician.

**The Bowels.**—The bowels should be opened on the third day and once daily thereafter.

This may usually be accomplished by a rectal injection of two teaspoonfuls of clear glycerine, previously warmed, or an enema of a quart of warm water, or one or two ounces of a saturated solution of Epsom salts, repeated as required.

**Duration of Lying-In.**—The patient should not sit up in bed for the first week, except by order of the physician.

Should as a rule maintain a reclining posture on the bed or lounge throughout the second week.

May, in normal cases, occupy her chair a portion of the day during the third week.

May have the liberty of her room during the fourth.

May leave her room at the end of a month, unless otherwise directed.

**Use of the Catheter.**—Instrument, a soft rubber velvet-eyed catheter in good order.

Always boil the catheter for fifteen minutes just before using.

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Cleanse the hands as directed on page 23 before handling the sterilized catheter.

The patient should lie on the back with the knees drawn apart.

Let the patient or an assistant retract the labia so as to fully expose the orifice of the urethra and hold them apart till the catheter is passed.

Cleanse the orifice and the surrounding surfaces with one of the mercurial solutions.

Lubricate the catheter with clean vaseline.

Pass it, by the aid of the eye, about one and a half inches, or until the urine begins to flow.

Collect the urine in a cup or small bowl.

Prevent entrance of urine into the vagina, and its contact with genital wounds.

Cleanse the instrument carefully after using.

Repeat the evacuation of the bladder once in eight hours.

## PREVENTION OF CHILDBED FEVER.

Childbed fever is caused by the invasion of the genital wounds by living microörganisms or germs.

The carriers of the disease germs are in nearly all cases the hands of the doctor or nurse, instruments, utensils or other appliances brought in contact with the genitals.

The disease germs are destructible by certain antiseptic agents.

Childbed fever is, therefore, a preventable disease.

Prevention depends upon keeping everything that comes in contact with the birth canal germ-free or aseptic by the faithful use of antiseptic agents, especially during the labor and for a week at least after delivery.

The following are the best germ destroying or **Antiseptic Agents :—**

BOILING OR STEAMING for half an hour.

DRY HEAT at 234° F. for one or two hours (baking in an oven).

BICHLORIDE OF MERCURY eight grains, common salt eight grains, water one quart (a deadly poison).

BINIODIDE OF MERCURY eight grains, iodide of potassium eight grains, water one quart (also poisonous).

CHLORINATED SODA (Labarraque's Solution) of good quality, one ounce in ten ounces of water.

CARBOLIC ACID one ounce and glycerine one ounce in eighteen ounces of water (not so good as the preceding).

For cloths, linen, utensils, etc., any of these agents is suitable, except the chlorinated soda which is destructive of the fabrics.

For the hands, either the bichloride or the biniodide of mercury or the chlorinated soda solution should be used; for metallic instruments, boiling or steaming for an hour.

NURSE'S CLOTHING.—The nurse should make an entire change of clothing immediately before taking charge of an obstetric case.

Should wear wash-dresses.

Her clothing should be frequently changed, and at all times absolutely clean.

CARE OF THE HANDS.—Should keep her hands scrupulously clean and the nails cut short.

Cleanse the hands as follows immediately before contact with the genitals of the obstetric patient.

1. Clean the nails dry.

2. Scrub the hands and forearms for three minutes with hot water, soap and a hand-brush, paying special attention to the nails and finger tips.

3. Rinse in clean water.

4. Scrub in like manner with the biniodide or bichloride solution and another hand-brush free from soap.

Hold the hands for a moment again in the antiseptic solution each time before touching the genitals.

After sterilizing refrain from wiping the hands and touch nothing that is not aseptic.

To keep the hands soft after the use of antiseptics, wash in plain hot water, rub well with glycerine and water and wipe dry.

## CARE OF THE CHILD.

**On Birth** cleanse the face and especially the eyes, preferably with the biniodide or bichloride of mercury solution, and dry the eyes thoroughly.

Rub the skin with sweet oil or vaseline to facilitate the subsequent removal of the cheesy matter.

Wrap the child in flannel and keep warm. Carefully avoid chilling.

Within a few hours after birth inject a tablespoonful of warm water into the rectum to provoke movement of the bowels, if necessary in order to make sure that the rectum is pervious.

**Bathing.**—Feeble children should not be bathed for several hours, and in some cases days, after birth. Rub daily with sweet oil instead.

The best time for the bath is a morning hour midway between feedings.

Use an infant's bath-tub. Place it near the heater or where the temperature is about 75° F.

Temperature of the water, 98° F., by the thermometer.

Keep the child's body immersed during the bath, supporting the head above the water with the hand.

Duration of bath should not exceed five minutes.

Use a soft fresh-boiled wash-rag instead of a sponge.

Use Castile soap and little of that.

Cleanse the scalp thoroughly.

Dry rapidly by enveloping in the towel with but little friction. During the first week or two the skin is irritable and easily injured by chafing.

In older infants moderately brisk friction with the bare hand may be used, after drying the skin, to secure full reaction.

Don't expose the new-born child to the slightest chilling.

Infant powder is usually unncessary.

In case of irritation in the folds of the skin, finely powdered talc, or oxide of zinc and lycopodium in equal parts may be used as infant powder.

The temperature of the bath may be gradually reduced to 90° F. by the age of six months if the child is robust.

Repeat the bathing daily in warm weather, twice weekly in cold.

Cleanse soiled portions of the body as often as soiled.

**Navel Dressing.**—Wrap the stump of the navel-cord with dry salicylated cotton and lay to the left side. Hold the dressing in place with a loose belly-binder of thin soft flannel.

Dry and re-dress the cord in the same manner after each bath; or, after the first bath, rubbing the child with sweet oil may be substituted for further bathing till the cord falls off. This usually happens about the fifth day.

If the cord develops a fetid odor notify the doctor.

**Clothing.**—The following is a simple and convenient dress for the first half-year.

1. The usual napkin of cotton or linen diaper.

2. A flannel undershirt of the softest material, without sleeves and opening in front.

3. A fine flannel dress with high neck and long sleeves, cut *à la princesse*, opening in front, and about twenty-five inches in length.

4. A muslin slip of the same style as the flannel dress.

5. Woolen socks reaching to the knees.

All clothing, including the belly-band, should be loose enough to easily admit two or three fingers underneath it.

The belly-band is not needed after the navel heals.

In all seasons children of whatever age should wear woolen garments next the skin, and the extremities should be as warmly covered as other portions of the body.

No garment should be worn till properly laundered.

**The Napkin** should be removed immediately when wet or soiled and replaced with a clean one fresh laundered. Bathe the soiled portions of the body with each change, using plain warm water without soap.

Do not permit the use of strong alkaline soaps or washing powders for washing diapers. Castile soap or borax may be used instead.

**Nursing.**—A teaspoonful of warm water un-

sweetened may be given now and then but no artificial food unless ordered.

Put the child to the breast after the mother has rested.

Ten or fifteen minutes is sufficient for each nursing.

Let it nurse once in four hours until the milk comes, then once in two hours. Double one interval in the night. Both breasts should be nursed at each nursing.

Gradually increase the intervals to about three hours by the age of three months.

The harm done by irregular nursing is a two-fold one:—

1. Digestion is hindered by feeding one meal before the preceding meal is disposed of.

2. The mother's milk becomes too rich with too frequent nursing and too thin when the intervals are too long.

The breast milk alone rarely suffices after about six months. Artificial feeding may then be added to the nursing and gradually increased till the child is wholly weaned.

The usual time for weaning is when the child has eight teeth, or about the twelfth month.

**Sleep.**—The infant should sleep by itself in a crib or cradle.

During the first two or three months of its life the child requires eighteen or twenty hours', at one year of age about fourteen hours' sleep out of the twenty-four.

**The Bowels** should move twice, not more than four times daily. A small soap, cocoa butter or glycerine suppository, or the injection of a teaspoonful of warm glycerine into the rectum may be used, as required, in case of constipation. Five to ten grains of manna or phosphate of sodium, or both, may be added to each feeding or given in water as a laxative.

Warmth to the abdomen and gentle massage are harmless and useful remedies for colic.

**Useful Hints.**—Premature and feeble children require special care to keep them constantly warm.

Should the child's breasts become swollen no treatment, as a rule, is required.

Notify the doctor of the slightest discharge from the eyes.

The temperature of the child, taken in the rectum, may afford important information.

The infant may be taken out of doors for a few hours daily in suitable weather after the first month.

The child's habits will be in great part what the nurse makes them.

# ARTIFICIAL FEEDING—DIETARY OF INFANCY AND EARLY CHILDHOOD.

**First Six Months.—**

MILK MIXTURE.

| | |
|---|---|
| Cow's milk—mixed dairy milk— | 10 ounces.* |
| Water, previously boiled, | 5 " |
| Milk sugar (recrystallized and perfectly pure), | 6½ drachms. |
| Common salt, | 8 grains.† |
| Lime-water—just before feeding— | 1 ounce. |

Mix.

MEIGS' MIXTURE.‡

| | |
|---|---|
| Cow's milk—mixed dairy milk— | 2 ounces. |
| Cream, containing 20 per cent. of fat, | 3 " § |
| Water, previously boiled, | 10 " |
| Milk sugar, | 6½ drachms. |
| Lime-water—just before feeding— | 1 ounce. |

Mix.

During the first two or three weeks the first mixture should usually be reduced by adding three to five ounces more water than the formula prescribes.

Either of these mixtures should be prepared, bottled and sterilized soon after the milk is delivered, in quantity sufficient for the day's consumption.

STERILIZE AS FOLLOWS:—Fill ten clean bot-

---

* Use a measuring-glass to be had at the drug stores.

† Have powders, each containing 6¼ drachms of milk sugar and eight grains of salt, prepared by your druggist, or use for the sugar a measure made to hold one drachm, and add salt to taste.

‡ As modified by Rotch. Closely resembles human milk.

§ Best, that obtained by the centrifugal machine, since it may be had fresh.

tles* to the shoulders, each holding enough for one feeding. Plug the mouths with rubber stoppers. Rubber stoppers may be had, specially made for the purpose, at the druggists'.

Stand the bottles in a kettle and cover to the shoulders with cold water. Boil twenty minutes.

Or, better, steam the bottles for thirty minutes, in a steam sterilizing apparatus to be obtained at the drug stores.

Place the stoppers loosely in the necks of the bottles for the first ten minutes of the boiling, then push them in firmly.

Keep on ice in hot weather.

Cow's milk, to be had in its best state, must be sterilized at the dairy immediately after milking and served in the sterilizing cans or bottles. When the can is first opened, transfer the contents to the nursing-bottles and resterilize.

FEEDING.—Warm the bottle to 100° F. before feeding, then remove the stopper, add half a teaspoonful of lime-water for each ounce of the prepared food† and slip a clean rubber nipple over the neck of the bottle.‡

Let the child nurse directly from the sterilizing bottle.

---

* Or as many as the number of daily feedings.

† The addition of lime-water (or of baking-soda, half a grain to each ounce of prepared food) is essential since cow's milk is acid, human milk alkaline.

‡ See "Partial Peptonizing," p. 32.

Cleanse the nipple inside and out after each feeding, and the bottle in like manner.

Boil the nipple for ten minutes before using and the bottles before refilling.

AMOUNT AND FREQUENCY.—RULES FOR GENERAL GUIDANCE.

| AGE. | INTERVALS OF FEEDING.* | AMOUNT AT EACH FEEDING.† | NUMBER OF DAILY FEEDINGS. | AVERAGE DAILY AMOUNT. |
|---|---|---|---|---|
| First day. | 2 hours. | 1 drachm. | 10 | 10 drachms. |
| Second day. | 2 hours. | ½ ounce. | 10 | 5 ounces. |
| Third day. | 2 hours. | 1 ounce. | 10 | 10 ounces. |
| Second week. | 2 hours. | 1¼ ounces. | 10 | 12½ ounces. |
| Six weeks. | 2½ hours. | 2¼ ounces. | 8 | 18 ounces. |
| Three months. | 3 hours. | 4 ounces. | 6 | 24 ounces. |
| Six months. | 3 hours. | 6 ounces. | 6 | 36 ounces. |

Small and feeble children require to be fed more frequently and in smaller quantities, large and robust children less frequently and in larger quantities than the foregoing table prescribes. The daily allowance required must be determined for the individual case by trial.

The stomach capacity, at birth, is approximately $\frac{1}{100}$ the weight of the child's body.

Take the child's weight once a week as a guide to the feeding. A well nourished child gains about five ounces weekly during the first five months.

PEPTONIZED MILK.—May be used as a temporary expedient in cases of very feeble digestion.

* Double one interval in the night.
† By measuring-glass.

Peptonize the contents of each bottle shortly before feeding, as follows: For each ounce of the sterilized mixture add extract of pancreas* (Fairchild's) one-fifth grain, bicarbonate of sodium three-fifths grain,† and shake till dissolved. Stand the bottle in water at the temperature of 105° F. for fifteen minutes. If the milk becomes too bitter reduce the time to ten or even five minutes.

PARTIAL PEPTONIZING.—Either of the food mixtures—p. 29—should be partially peptonized for the first two or three months, except in case of the most robust children. For this purpose add the extract of pancreas and the bicarbonate of sodium to the contents of the nursing-bottle *immediately* before feeding and in the proportions above stated. A partial digestion of the food thus takes place in the bottle while the child is nursing it.

The peptonizing, when no longer required, should be discontinued *gradually*, by daily diminishing the quantity of the peptonizing powder.

**Six to Twelve Months.**—Five or six feedings daily, once in 3 to 3½ hours. Average daily amount, thirty-six to forty-eight ounces.

Some farinaceous material may, in most cases, be added to the food, as follows:

BREAD JELLY.—Soak four ounces of stale wheat meal (Graham) bread in cold water for six or eight

* To be had of the druggists.

† Omit the lime-water when bicarbonate of sodium (baking-soda) is used.

hours. Then squeeze the water out of it. Boil the pulp for one and a half hours in enough fresh water to make a thick gruel. Rub through a fine sieve and allow to stand. Mix, while fresh, one part of the jelly thus formed with eight of either of the above-given mixtures (page 29) before sterilizing.

BARLEY OR OATMEAL GRUEL.—Boil for at least half an hour a tablespoonful of barley or oatmeal in one pint of water. Occasionally add water to maintain the original pint. Strain and add salt to taste. Make fresh daily. Combine with either of the mixtures in the proportion of one part of the gruel to four of the mixture before sterilizing.

Barley gruel is better if there be looseness of the bowels, oatmeal in case of constipation.

Undiluted cow's milk mixed, in the proportions given, with any of the above-named farinaceous preparations, and sterilized, is frequently well borne by healthy children after nine or ten months.

**Twelve to Eighteen Months.** — Four or five feedings daily.

Whole milk, sterilized, with barley or oatmeal gruel or bread jelly in the proportions above given.

Two or three ounces of raw beef juice, moderately seasoned, may be given daily, either mixed with the milk or separately. It should be prepared at least twice a day.

The simpler kinds of food requiring mastication may be added after the child has sixteen teeth, such

as oatmeal and milk, or wheaten grits, well cooked, or stale bread and milk.

Scraped beef or soft-boiled eggs may be allowed two or three times weekly.

**Eighteen Months to Two Years.**—Four or five feedings daily.

If the child is hearty a little fine cut meat may be given with the midday meal, such as tender beef, lamb or chicken. This, however, is not essential.

Milk should be the basis of the feeding till the child has all its teeth and may constitute a part of it for several years longer. Milk, beef juice and the farinaceous preparations above mentioned afford a sufficient dietary for the entire period of infancy.

Proprietary foods for infants are not to be recommended.

**Two to Three Years.**—May sit at the table. Add to the dietary fine cut beefsteak, roast beef, chicken, turkey, fresh fish, mashed potato, fruits, bread and butter.

**Three to Five Years.** — Add omelet, oysters, lamb chops, mutton, chicken fricassee, beef steak, tomatoes, peas, beans; occasionally, stewed fruits in season. Forbid tea, coffee, wine and beer.*

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* For further information concerning the management of the child, see "Hygiene of the Nursery," by Louis Starr, M. D., a book which will be found useful to both mothers and monthly nurses.

# MANAGEMENT OF THE BIRTH IN THE ABSENCE OF THE PHYSICIAN.

When the head is apparently about to be born, in the absence of the doctor, place the patient upon her left side with her knees drawn up and her back near the edge of the bed.

Scrupulously cleanse your hands and arms as directed on page 23.

Cleanse the patient's external genitals as in other cases.

Expose and watch the surface of the pelvic floor —the space immediately about the genitals and anus.

For several minutes, sometimes a half-hour or more, before the head is born, the pelvic floor bulges outward, at least during the pains.

No internal examination is necessary.

As soon as the head can be seen at the vulvar fissure, place the fingers against it and hold it back during the pains enough to permit only very gradual descent.

This gives time for the vaginal orifice to stretch and thus tends to save tearing.

In first labors a half hour or more will be required from the time the pelvic floor begins to bulge.

In subsequent labors fifteen or twenty minutes will usually suffice.

If the head is being driven down too forcibly

ask the patient to avoid straining by breathing rapidly during the pains.

On birth of the head pass the finger within the passages to learn if the cord is wound about the neck.

If it is, pull the loop or loops of cord carefully down over the head.

See that the child's face does not lie in a pool of fluids.

Immediately on birth of the head place one hand flat upon the abdomen over the uterus. "Watch" the uterus, with the hand upon the abdomen, till child and placenta are delivered and for a half-hour longer, till the uterus can be felt to contract firmly.

On delivery of the trunk turn the patient upon her back and teach a bystander to watch the uterus temporarily.

Make the child cry out by slapping its back with the hand or a wet towel.

If the child does not breathe let an assistant hold its body in a basin of water at a temperature of 98° F., with the head partially bent backward, keeping the mouth just above the water.

Cleanse the face and spread a clean, coarse towel over it.

Press one hand firmly over the child's stomach, close the nostrils with the other.

Applying the mouth over the child's mouth, gently force air into its lungs through the intervening towel.

Repeat twenty times per minute.

Tie the cord only after it has nearly or quite ceased to beat at a point near the vulva.

Tie firmly an inch and a half from the navel.

Tie again an inch or two farther away.

Cut between the ligatures, near the first.

Press the end of the stump repeatedly with a fresh towel to see if it bleeds.

Examine it occasionally for an hour or two and if it oozes tie again just behind the first ligature.

If necessary, compel the uterus to contract, by friction or pressure, as directed on page 12.

Don't pull upon the cord.

When the placenta is expelled, twist the membranes into a rope by turning the placenta over and over till the membranes all come away.

Watch the uterus for at least a half-hour longer to make sure that it contracts firmly.

## GLOSSARY.

ABDOMEN, the belly; the cavity of the body bounded above by the diaphragm and below by the pelvic entrance.

ANÆSTHETIC, an agent for producing insensibility to pain.

ANTISEPTIC, preventive of septic poisoning or infection.

ASEPTIC, free from septic poisoning and the germs which cause it.

CATHETER, a tubular instrument used for drawing off the urine.

DEFECATION, the act of evacuating the bowels.

DOUCHE, a stream or jet of fluid projected against some part of the body for cleansing it, or for remedial purposes.

DRACHM, 60 grains, 1-8 ounce. In fluid measure about a teaspoonful.

FŒTUS, the unborn child.

FUNDUS OF THE UTERUS, the upper end of the uterus.

GENITALS, the sexual organs.

GRAIN, the smallest unit of weight; in Troy or apothecaries' weight, 1-480 part of an ounce. The ounce avoirdupois is equal to 437 1-2 grains.

HEMORRHAGE, bleeding.

LABIA, lips; as applied to the external sexual organs, essentially the lateral halves.

LIGATURE, a thread or cord of silk, or other material tied around a part for the purpose of constricting it.

LOCHIA, the discharge which takes place from the birth-canal for two to four weeks after labor.

LOCHIAL GUARD, the napkin or other dressing worn over the external genitals after labor to receive the lochial discharge.

MECONIUM, the dark greenish matter contained in the intestinal canal of the new-born child.

MICTURITION, the act of voiding urine.

NAVEL, the point near the center of the abdominal wall at which the umbilical cord was attached during fœtal life.

NAVEL-CORD, or umbilical cord, the cord which connects the fœtus with the placenta. It carries the vessels which supply blood to the fœtus.

OUNCE, 480 grains; 8 drachms; 1-12 pound apothecaries' weight; 1-16 pound avoirdupois. In fluid measure, 1-16 pint; about two tablespoonfuls.

PELVIS, the bony basin at the lower extremity of the trunk.

PEPTONIZE, to convert into peptone; to partially digest.

PERINEUM, the body of muscular and other structures between the lower end of the rectum and the vagina.

PLACENTA, the afterbirth.

PUBES, the prominent, central portion of the pelvis in front.

PUERPERAL PERIOD, the period of about six weeks following labor.

RECTAL, pertaining to the rectum.

RECTUM, the lower, or pelvic, portion of the large bowel.

RETENTION OF URINE, excessive accumulation of urine in the bladder from inability to pass it.

SATURATED SOLUTION, a solution as strong as it can be made.

SEPSIS, a local affection of the tissues, or a general affection of the system caused, directly or indirectly, by the presence of certain species of germs. A kind of blood-poisoning.

SEPTIC, pertaining to sepsis or its causes. Affected with sepsis.

STERILIZE, to make germ-free.

SUPRAPUBIC, pertaining to that part of the abdominal wall directly above the pubes.

SUTURE, a thread of silk or other material for sewing together the lips of a wound.

UMBILICUS, the navel.

URETHRA, the canal through which the urine is discharged from the bladder, about 1 1-2 inches in length.

UTERUS, the womb.

VAGINA, the canal leading from the external sexual organs to the uterus.

VULVA, the external sexual organs of the female.

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